

MOTOR COORDINATION ACTIVITIES: STRIDE LENGTH AND HEIGHT

AGILITY LADDERS

Former British Prime Minister David Lloyd-George once said, “You can’t cross a chasm in two small jumps.” I think what he meant is that big steps can be scary but are sometimes necessary to get where you want. Big steps often take you from where you safely stand to a spot that’s way over there. In this activity, participants discover how step height can help lengthen their stride. They will also recall elements of Belly Button Training and the knee lifts practiced previously. Prior learning will definitely help them take this next big step.

Benefits »

- Improves stride length, strength, and balance.
- Practices transitions (moving from one position to another).
- Generates and controls momentum.
- Builds on previous activities.

Set It Up »

You will need masking tape or chalk to create an agility ladder with about 12 rungs spaced progressively farther apart, 12 to 30 inches (51-76 centimeters) at the widest. Put the ladders next to a handrail for balance support. If a handrail is not available, plan on holding one or both hands (or forearms and elbows) as participants step through the ladder.

How to Do It »

The easiest way to increase step length is to increase step height. That means a bigger knee lift before taking a big step. Also remind participants about Belly Steps (see page 242) and how their trunk (belly button) needs to follow their foot in order to take a successful big step.

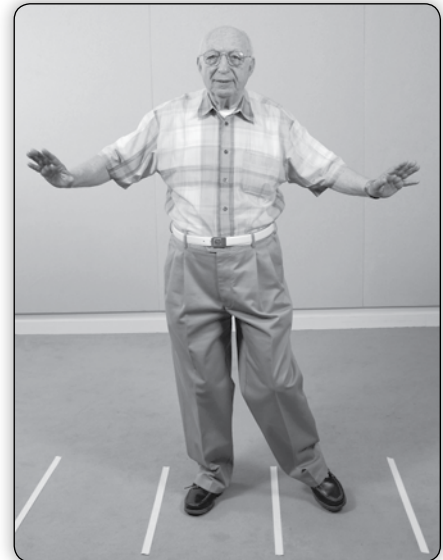
- Participants will need to take turns on the ladder. Have them start at the end with the rungs closest together.
- Instruct participants to begin each step on the ladder with a big knee lift and to follow the step with their torso, as they did in Belly Button Training.
- Cue them also to set visual targets and look a few steps ahead on the agility ladder; two or three rungs ahead is a good start. Looking down at each step will not be helpful.
- Use the following cues.
 - Look a few steps ahead.
 - Knee lift and step forward to the first line. Land heel-toe.
 - Move forward to the next line, using the same knee lift and step motion. Keep going.
 - How’s it going? What worked?



- Did the knee lifts help you get farther?
- Did it help to focus on your torso moving toward the stepping foot?
- How about looking ahead—did the visual targets help?
- Do a few steps where your foot moves out but you don't move the torso forward. Can you feel a difference? (It's a big difference!)
- Do it again, moving the torso forward. Does that work better?
- Try it with no knee lift.
- Try it with a knee lift.
- Big difference? (For sure!)

Agility Ladder—Sidestepping

- ⦿ This is an intermediate to difficult activity where participants step through the ladder moving sideways.
- ⦿ Use the same techniques—big knee lift, belly moves with stepping leg.
- ⦿ Participants sidestep through the agility ladder between the rungs.
 - Abs are braced, ribs are lifted, shoulder blades are back and down, and knees are soft.
 - Step together, step.
 - Step together, step.
 - Knee lift, step with trunk following, and transfer.
 - Knee lift, step, and transfer.



Give It More Balance »

- ⦿ Use less support (hold both hands lightly, hold just one of their hands, or hold one hand lightly).
- ⦿ Intermediate: Take four steps and stop (they have to control momentum).
- ⦿ Go slower on some passes and faster for others; slow will be more difficult and they need to control the change of pace.
- ⦿ Reach to the side with each step: Step, reach; step, reach.
- ⦿ Side step through with hands on hips or out to the side.

Keep It Safe »

Make sure you can supervise participants closely. Hold their hands and forearms. Do the activity individually for the first several times, and with a handrail until they are willing to try it on their own.

Live It »

Crossing over the physical chasms in life is easier with big knee lifts and eyes on the goal.

AGILITY GRIDS

Agility grids are preplanned stepping patterns. Repeating the preset patterns make certain components of gait more symmetrical.

Benefits »

- ⦿ Practices agility skills.
- ⦿ Improves gait symmetry.
- ⦿ Requires postural control.

Set It Up »

Make a grid or grids using masking tape or chalk. Decide on stepping patterns for each. Think of it like hopscotch for your grandpa. Hopscotch can be a pattern, but we don't want them jumping between squares. The squares should be wide enough for a foot to land in and long enough that the forward pattern is similar to a step length. I usually make a grid about 4 to 6 spaces (foot spaces) across and 10 to 12 spaces long. It depends on how much space, time, and tape you have. Then put markers (dots, numbers, or Xs) to mark the pattern you want them to use.

The easiest pattern would be right down the middle— a right-left, right-left walking pattern. Intermediate might be wide-wide, narrow-narrow stepping patterns, or a mix. Advanced skills might call for cross-over steps. Over time you can add dual tasks, by having them keep a rhythm to their steps, recite an old jump rope song, or toss a ball from hand to hand.

How to Do It »

Easy Grids

These patterns are similar to a normal walking gait.

Moderate Grids

These grids require bigger steps and more complicated stepping patterns.

Hard Grids

This grid requires cross-over stepping patterns.

	1		
		2	
	3		
		4	
	1		
		2	

Easy grids

3	1	2	4
7	5	6	8
3	1	2	4
7	5	6	8

Moderate grids

		1	2
4	3		
		5	6
8	7		
		9	10

Difficult grids

Give It More Balance »

- ⦿ Have them go through the course at a cadence.
- ⦿ Challenge them to do it a little faster.
- ⦿ Have participants recite a nursery rhyme or count backward by 4 from 101.
- ⦿ Have them walk through the grid kayaking with a stick.

Keep It Safe »

For groups, make two grids, one easier than the other. Everyone should be able to try at least one grid. Be available to hold hands or put them along a railing. Participants should only do what they are comfortable doing.

Live It »

Agility grids are not unlike maneuvering through the aisles of grocery stores, places of worship, or theaters. These grids will increase balance confidence in real-life situations and help with everyday transitions.